LL-509RGBC2E-006

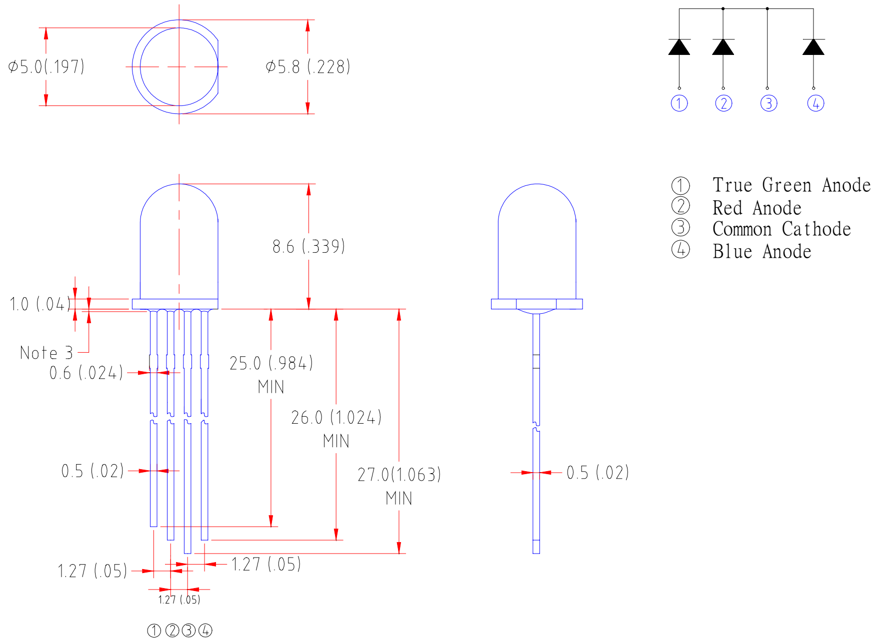
DATA SHEET

QC: ENG: Prepared By:

Features

- ♦ High intensity
- ♦ Standard 5mm diameter package
- ♦ Wide viewing angle
- ♦ General purpose leads
- ♦ Reliable and rugged.
- ♦ Color: full color

Package Dimension:



Part NO.	Material			Lens Color	Source Color
LL-509RGBC2E-006	Red AlGalnp	Green GaN/SiC	Blue GaN/SiC	Water Clear	Red & True Green & Blue

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(.010")mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm(.04") max
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice
6. Caution in ESD:
   Siatic Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED.All devices, equipment and machinery must be properly grounded.

Absolute Maximum Ratings at Ta=25℃

Parameter	MAX.	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	35	mA
Derating Linear From 50℃	0.4	mA/℃
Reverse Voltage	5	V
Operating Temperature Range	-40℃ to +80℃	
Storage Temperature Range	-40℃ to +80℃	
Lead Soldering Temperature [4mm(.157”) From Body]	260℃ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	Red	1600	3200	7000	mcd	I_F=20mA Note 1
		True Green	2000	4000	8000		
		Blue	1000	2000	4000		
Viewing Angle	$2\theta_{1/2}$	Red	20	25	30	Deg	Note 2
		True Green	20	25	30		
		Blue	20	25	30		
Peak Emission Wavelength	λp	Red	621	626	631	nm	Measurement @Peak Note 3
		True Green	520	525	530		
		Blue	465	470	475		
Spectral Line Half-Width	$\triangle\lambda$	Red	15	20	25	nm	
		True Green	35	40	45		
		Blue	21	26	31		
Forward Voltage	V_F	Red	1.6	2.05	2.5	V	I_F=20mA
		True Green	2.8	3.6	4.0		
		Blue	2.8	3.6	4.0		
Reverse Current	I_R	Red	---	---	100	μA	V_R=5V
		True Green					
		Blue					

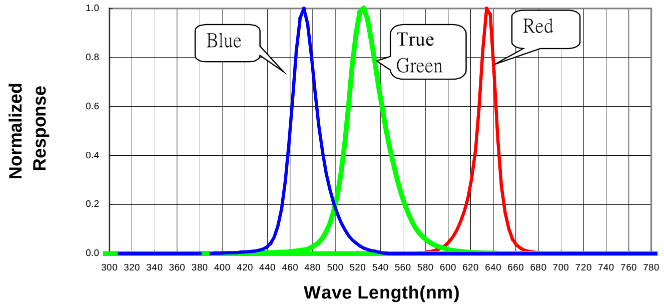
Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λ p) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

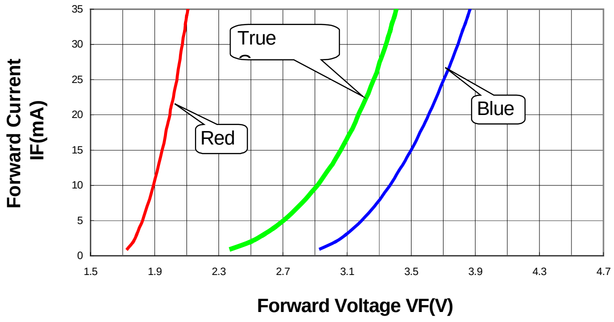
Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature unless Otherwise Noted)

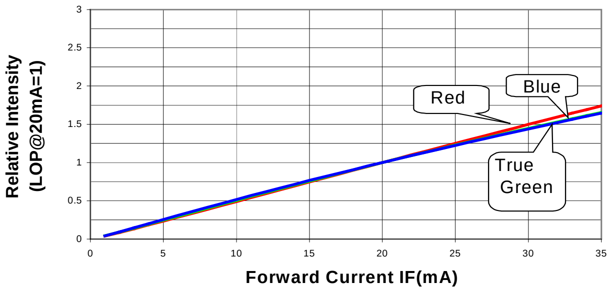
Spectral Radiance True Green Peak @ 525nm
Red Peak @ 636nm
Blue Peak @ 472nm



Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Beam Pattern

